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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,314	02/17/2004	B. Raghava Reddy	HES 2002-IP-009337U1	9746
28857	7590	12/19/2006		
CRAIG W. RODDY HALLIBURTON ENERGY SERVICES P.O. BOX 1431 DUNCAN, OK 73536-0440			EXAMINER KUGEL, TIMOTHY J	
			ART-UNIT 1712	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/19/2006	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/780,314

Applicant(s)

REDDY ET AL.

Examiner

Timothy J. Kugel

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-23,27-35 and 37-57 is/are pending in the application.
- 4a) Of the above claim(s) 41-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-23,27-35,37-40,56 and 57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 21-23,27-35 and 37-57 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 21-23, 27-35 and 37-57 are pending as amended on 1 December 2006, claims 1-20, 24-26 and 36 being cancelled. Claims 41-55 are withdrawn from consideration.

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1 December 2006 has been entered.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Response to Amendment***

4. Applicant's amendment, filed 1 December 2006, with respect to changing the term 'compound' to 'composition' in claims 21 and 35, changing the language "that is released downhole..." to "downhole releasable" in claim 29, removing the language "forms a physically crosslinked gel" in claim 33, changing the term 'compound forms' to "composition is capable of forming" in claim 34 and changing the dependency of claim 40 has been fully considered and overcomes the following:

The rejection of claims 21-23, 27-35 and 37-40 under 35 U.S.C. 112, second paragraph, as being indefinite has been withdrawn.

The rejection of claims 29, 30, 33 and 34 under 35 U.S.C. § 101 because the claims are directed to neither a “process” nor a “composition,” but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. § 101 which is drafted so as to set forth the statutory classes of invention in the alternative only has been withdrawn.

#### ***Claim Rejections - 35 USC § 112***

5. Amended claim 33 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 33 recites, “wherein the thermally activated viscosification composition comprises a linear.” It is unclear as to what type of linear compound claim 33 is directed. For the purpose of examination, claim 33 was construed to recite, “wherein the thermally activated viscosification composition comprises a linear polymer.”

#### ***Claim Rejections - 35 USC § 102***

6. Claims 21-23, 27, 28, 31-35, and 37-39 stand and new claim 57 is rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 6,169,058 (Le hereinafter).

Le teaches a wellbore treating fluid—specifically a proppant-laden (Column 3 Line 33 – Column 4 Line 16) fracturing fluid (Column 1 Lines 6-16)—comprising from

about 0.1% to about 1.5% (Column 3 Line 33 – Column 4 Line 16) of a non-ionic hydrophobically modified polymer—specifically a formulation of acrylamide, sodium acrylate and a crosslinker (Column 11 Lines 56-63)—and a nonionic surfactant (Column 12 Line 63 – Column 13 Line 7).

Since Le teaches the same composition used in the same manner as claimed, the thermal activity and reversibility of the gel and the downhole releasability and crosslinkability of the Le composition would inherently be the same as claimed.

### ***Claim Rejections - 35 USC § 103***

7. Claims 29 and 30 stand and new claim 56 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Le as applied to claims 21-23, 27, 28, 31-35, 37-39 and 57 above in view of US Patent 6,444,316 (Reddy '316 hereinafter).

Le teaches a wellbore treating fluid—specifically a proppant-laden fracturing fluid—comprising from about 0.1% to about 1.5% of a non-ionic hydrophobically modified polymer—specifically a formulation of acrylamide, sodium acrylate and a crosslinker—and a nonionic surfactant as detailed above. Le further teaches that the composition may contain salts—including sodium salts (Column 16 Lines 7-40).

Since Le teaches the same composition used in the same manner as claimed, the thermal activity, downhole releasability and crosslinkability of the Le composition would inherently be the same as claimed.

Le does not disclose expressly that the salt is encapsulated.

Reddy discloses oil field treatment compositions comprising encapsulated salts such as ammonium chloride, ammonium persulfate, sodium chlorate and sodium perborate (Column 4 Lines 37-46).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include the encapsulated salts of Reddy in the composition of Le. The motivation to do so would have been to control the times when the chemicals are released in aqueous fluids (Reddy Column 1 Lines 13-21).

8. Claim 40 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Le as applied to claims 21-23, 27, 28, 31-35, and 37-39 above in view of US Patent 5,192,461 (Tomaszewski hereinafter).

Le teaches a wellbore treating fluid—specifically a proppant-laden fracturing fluid—comprising from about 0.1% to about 1.5% of a non-ionic hydrophobically modified polymer—specifically a formulation of acrylamide, sodium acrylate and a crosslinker—and a nonionic surfactant as detailed above.

Since Le teaches the same composition used in the same manner as claimed, the thermal activity and downhole releasability of the Le composition would inherently be the same as claimed.

Le does not disclose expressly that the non-ionic surfactant is an ethylene glycol decyl ether surfactant.

Tomaszewski discloses a composition comprising a surfactant with ethylene glycol decyl ether moieties (Column 2 Lines 47-59).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include the ethylene glycol decyl ether surfactant of Tomaszewski in the composition of Le. The motivation to do so would have been increase the solubility of any ethoxylated nonyl phenols present (Tomaszewski Column 2 Lines 60-68).

### ***Response to Arguments***

9. Applicant's arguments filed 1 December 2006 have been fully considered but they are not persuasive.

Applicant argues that Le teaches a different polymer than instantly claimed—e.g. a hydrophilic water-insoluble polymer rather than a hydrophobically-modified water-soluble polymer claimed; however, Le clearly teaches the same polymer—specifically copolymers of acrylamide and sodium acrylate (Column 9 Lines 13-24 and Column 11 Lines 57-63) which must possess the same properties as claimed.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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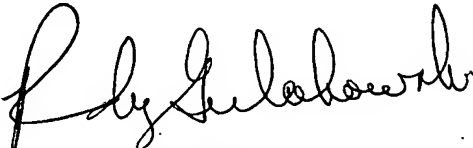
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Kugel whose telephone number is (571) 272-1460. The examiner can normally be reached 6:00 AM – 4:30 PM Monday - Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJK  
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